AUGUST / 1960

Manage

SPACE SCIENTISTS

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- MANAGEMENT AND POLITICS
- ELIMINATE "PAPER WORK MONSTER"
- HOW VALUABLE ARE FOREMEN?

5 dollars / year

For the Lack of a Vote

(Maybe Yours)

An Election Was Lost

The importance of one vote looms more important than ever in determining election results.

There are numerous examples of close elections. In the 1956 contest for Governor of Illinois, the Democratic candidate lost by less than one vote in each precinct to Republican incumbent William Stratton. Out of 9,588 precincts, the victory margin was only 7,916.

In the 1948 presidential election, Ohio and California were lost by Republican Thomas E. Dewey to Democrat Harry S. Truman by a margin of close to one vote per precinct. Ohio was lost by only 7,017 votes in 9,247 precincts; California, by 17,865 votes in 16,802 precincts. The combined electoral votes of these two states would not have elected Dewey, but would have thrown the election of the President into the House of Representatives because Truman would have been 13 electoral votes short of the necessary 266 majority in the electoral college.

Then there's the classic Texas election run-off between Senator Lyndon B. Johnson and Governor Coke Stevenson. The margin of victory which sent today's presidential candidate Johnson to the Senate was 87 votes out of 988,295 cast.

Texas has some 6,000 precincts. So today's Senate majority leader became a national figure by the small margin of 145/10,000ths of a vote in every election precinct.

Still think your single vote doesn't count?

Manage

THE NATIONAL MANAGEMENT ASSOCIATION

VOLUME 12 AUGUST, 1960 NUMBER 11

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OUR COVER

Dr. Wernher von Braun, right, director of Marshall Space Flight Center, Huntsville, Ala., reviews solar-system flight calculation in connection with Project Saturn with Dr. Helmut Hoelzer, left, director of the center's computation division; and Dr. Eberhard Rees, the center's deputy director for research and development. Read the complete story of powerful new computer on page 13.

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CIRCULATION THIS ISSUE: OVER 70,000, DOMESTIC AND FOREIGN.

MANAGE FORUM

by
Carl F. Tossey

Failure to Recognize Foremen Is Costing Management $$$

On page 27 in this issue, William Gillick in his article "How Valuable Are Foremen?" writes "Foremen, at one and the same time, have been consistently job-evaluated near the bottom of the managerial totem pole and have been with equal consistency told that their jobs are among the most important to the industrial organization."

More often than not the foreman is not recognized as the vital part of management he really is. Failure to give foremen proper authority and training to fulfill it is costing top management a lot of money—money it can ill afford to waste.

Are foremen a part of management?

Let's take a look at management under our present industrial structure and consider the ranges of duty and responsibility lately assigned to foremen. It is at the foreman's level that effectiveness or ineffectiveness of supervision is most apparent, even though ultimate responsibility is at a higher level.

How valuable is a foreman? Gillick asks.

Perhaps we can answer the question this way: Does top management realize that a foreman supervising a group of 12 to 15 workers controls directly the expenditure of several hundred thousand dollars in labor, material and overhead

each year? Add to this his influence on sales, quality, scheduling, customer good will and industrial relations.

It seems to us that too often management is interested solely in having its foremen "management conscious." Isn't this a two-way street? Shouldn't management be "foreman conscious" as well?

This is the way it must be. Management has to be willing to give the foreman the necessary "tools" to assist him in carrying out his responsibilities. Every executive including the president must think of foremen as a part of management. If they are a part of management they should be consulted on management plans and policies.

Management should stand like a rock in back of every foreman, just as it would defend any top executive. In this way foremen will feel a part of the team.

The trouble with many companies today is that they feel foremen are incapable of handling operating problems within their areas. Of course, it is obvious where these problems wind up—on the desk of top management. Such action tends to discourage the foreman and give him the outlook that "I'm just working here."

In the factory (and here's what most management officials fail to recognize) the foreman is the company. The way the foreman understands or misunderstands company policies and rules is the way the worker will understand them.

The answer to the problem seems to be more training. Yet how many companies claim they cannot afford to train foremen? Can they afford not to?

For if the foreman is unable to crystallize company policy to the worker in understandable terms, the union leader will take over as leader of the department. And because he has been selected for his job by the workers, the union steward has a head start on the foreman.

Management must accept the fact that it is not its product that competes with competitors. It is the personnel. It is the end product of the personnel who do the supervising, buying, manufacturing and selling that constitutes the competition the competitor has to meet.

Businessmen advised to take an active interest in politics or face more government controllism . . heavier government spending . . an uncertain economic future

Management Makes Politics Its Business

by J. Frank Melton
District Manager, Southern Division
U. S. Chamber of Commerce

I think the president of the Armstrong Cork Company, C. J. Blackstrand, perhaps outlined this whole problem as succinctly as I have seen it when he said: "My purpose in discussing this subject—politics—is to enlist your support for grass roots political activity on behalf of sound government. It is my deep conviction that we businessmen have no choice. We must become personally active in this field and encourage others to follow suit, or in the end concede that some sort of state socialism is inevitable. So, any way we look at the apple, we arrive at the same problem—big government and what are we going to do about it, how we are going to stem it and curtail it."

Generally speaking, businessmen have shied away from the word politics. The result is that more and more men have been elected to Congress in recent years who are unfriendly to business—who are opposed to the principles of free enterprise —and who have little or no regard for the profit-and-loss system.

Members of Congress who owe their election and allegiance to special-interest groups are inclined to pay little attention to the recommendations of business on proposed legislation. They have their minds made up in advance. They listen most

attentively to the people they believe were responsible for getting them elected, and who will be out working for their re-election.

Now, I know that many businessmen will insist they *have* been active in politics. And to some extent that is true. Through their local chambers of commerce, businessmen have worked hard to create public opinion in favor of the business viewpoint.

They have let Congress know the views and recommendations of business on controversial issues—and in many cases, with good effect. A sterling example was the all-out effort by businessmen in support of the Landrum-Griffin Labor Reform Bill. *But few businessmen have been right on the firing line when it comes to the matter of selecting candidates for public office and working actively for their election. That is where we fail.*

If we are to have lawmakers in Congress who are open minded—who are willing to consider intelligent and reasonably objective recommendations, and to weigh the facts in the case—then the businessmen in the local communities must take a hand in nominating candidates and do everything possible to insure success at the polls for those candidates.

Mr. Melton presented this thought-provoking talk at a meeting of the Southern West Virginia Area NMA Council, Charleston, W. Va.

You know what happened in November, 1958. The American people sent to the Congress an increased number of men—in both parties—who favor more government controllism and heavier government spending.

I make that statement on the basis of the candidates' own pronouncements.

This could change our whole future—the future of business, the future of the economy and the future of the country.

Spendthrift government inevitably breeds inflation, of which we have far too much already. Inflation, today, is our No. 1 economic problem.

Unless it is halted, inflation will result in higher and higher taxes—and, sooner or later, a phony boom followed by a calamitous bust.

Government policy is an economic factor in every country—in the dictator states as well as in the democratic states. The difference is that a dictator state directs the economy, while a democratic state affects the economy. The government of the Soviet, for ex-

ample, owns the industries in Russia. It owns the department stores and most of the farm land. In effect, everybody works for the state.

By contrast, American industry is privately owned. Our economy is affected by government policy which—directly or indirectly—has had sanction from the people. Our national government policies are grown in the seedbeds of local politics. It is politics which shapes the nature of economic legislation under which we work and live. If the people of this country do not like an economic policy of the national government, it is within their power to change it—but they can only change it by exchanging the officeholders who wrote that policy for other officeholders who will write a better one.

Do you like an income tax structure which not only constricts our incentive to invest but makes it virtually impossible for many, if not most, people to save for investment? That is what we have.

We are going to need more investments in short order—and in a large way. The children who were born during World War II are pouring into the labor market in search of jobs—and it takes anywhere from $13,000 to $20,000—and in some fields of endeavor even more—to create one job.

We must face the fact that those who are politically active in this country write all the ground-rules, and those of us who are not politically active have to live by those rules. As of today, there are powerful forces in this country who have schooled themselves in politics as it is played at the grass-roots and in smoke-filled rooms. They are steering our economy to the left by engineering the endorsements, nominations and elections of politicians obedient to their will.

Labor is one group which has thoroughly absorbed the political textbooks. You and I may shake our heads and wring our hands over labor's political success, but can we honestly say that labor doesn't have a right to pursue political avenues towards its own objectives?

The democratic process can be a four-leaf clover to those who don't overlook it. It is clear that labor hasn't overlooked it. It is equally clear that too substantial a proportion of businessmen have walked right by it.

Let us consider for a moment just how deeply politically-made policy affects business today. I have mentioned the Federal income tax—and the

increasing centralization of governmental authority which is stripping the states of rights and responsibilities.

After that, begin to add up in your mind the innumerable special agencies of the Federal government whose policies affect our free market economy. Many of these agencies were created to deal with justifiable needs.

But the objectives of any agency and its policies are two different things. The objective may be a constant factor—a permanent thing—but the policies can be inconstant and shifting. An example which, very naturally, comes to my mind, is the present effort in the Congress to extend the coverage of the national wage and hour law to retail and service employees. This is a political attempt to extend national regulations deeper and deeper into local commerce, and I am quite sure that those members of the Congress who will support this proposal have few businessmen to thank for their nominations and elections, and the same is true of the extensions of Social Security benefits and taxes.

We businessmen must get into politics—actively—with both feet! Our problem, however, is basically one of neglect—and in particular the neglect of giving ourselves to political affairs. I am not necessarily suggesting that more businessmen run for office—although in many cases that would be a desirable thing. What I am suggesting is that businessmen lend their energies to support of candidates who will treat public office as a sacred trust. Sometimes, it may be necessary to almost literally create these candidates. Or at least comb the area for them—and talk them into running.

We have got to get down to the precinct level in our com-

In recent years a change has been taking place in the thinking of business and industry leaders on participation of their employees in politics. Today several companies, including General Electric and Ford, have actually organized political education programs in which employees are encouraged to participate. ***MANAGE will follow up J. Frank Melton's address with a subsequent article on the GE, Ford and other company political education programs and how such programs contribute to better government on local, state and national levels. Watch for it!***

munities because that is where the selection of candidates begins. It gets us nowhere to sit on the sidelines in lofty isolation. We must follow through from precinct meetings to the county conventions, and from there to the state conventions, and we must give close attention to the primary elections.

Why haven't we been doing these things to any considerable degree?

First of all, I think there is a tendency among businessmen to regard politics as sort of a "dirty business." Well, almost anything can be a dirty business if it is run by those with scant regard for ethics and the public well-being. Any profession can be a dirty business if its practioners fail to subscribe to some code of decency. Politics is what people make it.

Clarence B. Randall, former chairman of the board of Inland Steel had this to say:

"And, strangely enough, for many politicians, business is a dirty word. Both are wrong, and something should be done about it. The businessman needs the skill of the politician, and the politician needs the skills of the businessman. Neither can afford to call the other bad names. It is not true that the businessman responds only to self-interest. Dishonesty and selfishness are human defects that are attributes of a particular human being, not symbols of a calling. It would be my guess that they are found in about equal proportions among both politicians and businessmen."

Some businessmen will say that they think their organizations—such as chambers of commerce—are entirely capable of handling their political interest, so why should the individual bother?

But—let me ask you—can an organization, no matter how efficient—become a political party delegate to a state convention? We know better.

Can it vote in a political party meeting? Of course it can't. It takes an individual party member to become a delegate, and our organizations are non-partisan to begin with, and cannot concern themselves with candidates. Their concern is with issues—and I have in mind the selection, support and election of candidates.

May Offend Customers

Now I come to the most popular of all reasons why businessmen have shied away from politics. This is the idea that political activity may offend customers. In the days of "Tippecanoe and Tyler Too" and even in the days of William Jennings Bryan, there may have

been some validity to that concept.

I doubt very much if any housewife is going to refuse to patronize a certain department store because its president or vice-president is known to be politically active in one party or the other. And I have not heard that Republicans boycotted the Coca Cola Company when Jim Farley became the chairman of the board.

Personally, I think that the idea that active political participation in the party of his choice can hurt a man's business to any appreciable degree is a long-whiskered relic of the past which should have been decently buried a couple of generations back.

As a matter of fact, I think the record will show that political participation can actually help a man's business. If that were not so, we would not find so many attorneys who make no secret of their political activity, even though they have no idea of running for office. The answer, naturally, is that political activity helps them to become known. It is an ethical form of advertising.

We also find a great many insurance men who pursue politics as their principal avocation. . . . Let us lay the myth of politics as a kiss of death for business to a well-deserved rest, and take up another reason for non-participation. This reason has to do with the younger men in business—with management employees in general and with junior executives. Some of them will say: "The boss wouldn't want me to get mixed up in politics. I might lose my job." My first answer to that would be to pose a question: "Have you ever asked the boss, and if you haven't, why haven't you?" Maybe the boss would like to see his young men be politically active. But he might not like to force the idea on them.

My second answer is, that if a boss takes the attitude that he wouldn't like it, he is not exactly far-sighted. I can think of no more valuable training for a budding executive than political activity.

How to Become Effective

Now I come to that big-little word "how"—spelled H-O-W. I have talked about the need for businessmen to become politically active; I have talked about some of the reasons why they shun politics. Now I want to talk about how they can make themselves politically effective.

Sooner or later, some one was bound to come along with a practical study course in politics for the businessman—and someone has. That some one is

the Chamber of Commerce of the United States. The objective of the National Chamber's Political Participation Program is to help businessmen know how to become more politically effective by actively working within the party of their choice.

Those last six words are most important—"within the party of their choice," for the course is strictly non-partisan. In many areas of our country party labels do not have the significance they once had. It should be the objective of businessmen to support those who believe in the kind of government in which we believe, and there is ample opportunity to do this within either of our political parties.

The study course is available to local chambers of commerce, to civic organizations and to business concerns. It consists of nine workshops—one a week or one every two weeks if that is more convenient.

Political participation is not a short range proposition. The results of 1960 will depend on what we did in 1959. This is another way of saying that when it comes to political action we have to start early.

If we are going to have lawmakers in each community and in the states and in the Congress who are open-minded—who are willing to consider intelligent and reasonably objective recommendations—and to weigh the facts in the case—then the businessmen in every community must get busy and help elect such lawmakers.

This cannot be done from a central headquarters. The National Chamber can suggest procedure—and spell out all the axioms of politics—and set forth all the ground rules of politics in one, two, three order—but in the final analysis, the success of business participation in politics will be written in local organizations.

Calendar of NMA Management Unity Seminars

1960

September 11-16 **November 13-18**

1961

February 5-10 **April 2-7** **June 4-9**

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Space Flight in Minutes . . . Inside Computer

A new computer, the most powerful to be used in America's space program, was recently put to work on Project Saturn.

The computer will be a key design and development tool in building the free world's biggest space vehicle, according to Dr. Wernher von Braun. The IBM 7090 data processing system will be used by space scientists at Huntsville, Ala., to help meet the Saturn super-booster's critical timetable.

Dr. von Braun is director of the Development of Operations Division, Army Ballistic Missile Agency, AOMC. Last month the division formally became the George C. Marshall Space Flight Center of the National Aeronautics and Space Administration.

The Saturn vehicle is being built to send multi-ton payloads into earth orbit; around the moon and back; and into deep space. In the course of development work, the new solid-state computer is expected to achieve the most accurate and detailed trajectory simulations ever plotted.

Saturn's 1,500,000-pound-thrust booster will be "flown" thousands of times within the 7090 before being placed on a launching pad next year. With the new equipment, Marshall Space Flight Center personnel will see within a few minutes how their design modifications would affect an actual flight into space.

At dedication ceremonies, during which the electronic system was formally turned over to the center's Computation Division, Dr. von Braun said: "In a decade computers have developed from a curiosity and convenience in space vehicle design to an integral, indispensable element of our work.

"In 1951," he said, "we worked on the 200-mile Redstone ballistic missile using a computer which could add only 2174 numbers a

minute. Today we are working on the Saturn vehicle designed for deep space probes. We have an urgent need for the power of the 7090, which can add 13,740,000 numbers a minute."

The Marshall Space Flight Center's 7090 computer is the first of its type to be installed by International Business Machines Corporation for scientific or commercial data processing. Modified versions of the system are being incorporated into the Ballistic Missile Early Warning System.

Last month a second 7090 was installed in the Computation Division. Although the two solid-state computers replaced three large-scale vacuum tube machines, they more than tripled the computing capacity available to Project Saturn scientists and engineers.

Explore New Research Areas

The increased computing ability will help the Marshall Space Flight Center explore new areas of research opened by the clustering of eight powerful rocket engines in the Saturn booster. Measurements made as the booster generates up to 30,000,000 horsepower in static firing tests will be fed into the IBM 7090 to analyze vibration and heat transfer caused by interaction of the engines. Fuel slosh in the booster's multiple tanks also will be under study.

A major research effort utilizing the 7090 capabilities will examine the problems of multiplexing the Saturn's fuel supplies. If one or more engines should fail, the fuel would be redirected to other engines to enable the vehicle to continue its mission. Using the computer, Dr. von Braun's group will determine the best way to do this at various stages of flight under varying conditions of flame-out.

Dr. Helmut Hoelzer, director of the Computation Division, and Charles L. Bradshaw, deputy director, reported that because of Saturn's size and complexity, the amount of information obtained from each static firing test for computer analysis is eight to 10 times greater than in any previous space program. They said evaluation of telemetering data for a live flight of the single engine Redstone took as long as five to six weeks. It is expected the center's new 7090s will do the same job for the more complex Saturn in three or four days.

The 7090 is able to reduce the millions of pieces of information gathered from test firings into meaningful form quickly because of its operating speed.

It is able to call information from its magnetic core storage unit in 2.18 millionths of a second. With the use of a new data multiplexor, the system simultaneously is able to read information from magnetic tape, write information on tape and compute.

Spook Monitors Own Operations

To take full advantage of the computer's operating speed, the Marshall Space Flight Center Computation Division has devised an automatic system which enables the 7090 to monitor its own operations. It is called SPOOK — Supervisory Program Over Other Kinds— and represents an unseen hand telling the computer what to do at the right time to do it.

SPOOK consists of one reel of magnetic tape containing 50,000 instructions. As different types of work are processed, the computer will tell its operator what is being done and when tape reels must be changed.

There will be relatively few live tests of Saturn because of the vehicle's cost. Dr. Hoelzer, who has worked with Dr. von Braun in the field of rocketry and space flight for more than 20 years, said: "The V-2 rocket was developed at Peenemunde basically without automatic digital computers. As a result, there were approximately 1,000 test firings. Yet with the vastly more intricate Saturn, we have scheduled only 10 research and development firings.

"We now can stimulate a trajectory in a few minutes on the 7090 for several hundred dollars. It would cost millions of dollars to stage a live flight. Yet, by repeated flight simulation we can find out much of the information we would obtain from a launching."

To simulate Saturn flights, mathematical equations representing factors such as weather conditions and the rotation and gravitation of the earth and moon are stored within the 7090. Information about the design of the booster then is fed into the computer so that it can determine the trajectory the vehicle would take.

In addition to providing development assistance, the new systems also will have a direct effect on Project Saturn's computation costs. Dr. Hoelzer said the two 7090 systems will accomplish in eight hours what three large-scale vacuum tube machines accomplished in 20 hours. He said they will do this with a 25 per cent saving in machine time costs and a corresponding decrease in personnel time.

Records management is perhaps one of our most important, if not *the* most important, administrative functions in business today. It certainly represents the largest common overhead expense. No one job can be detached from paperwork in some form as there is always a certain amount of written documentation or communication in

Eliminate

"Paper Work Monster"

by L. W. Herford

every job, whether a man is in the maintenance shop or working in the office.

Records management is concerned with the generation as well as the selection, preservation, retention, and disposition of important records. Generally speaking, the primary objectives of a sound records program are:

A. Elimination of unnecessary records.

B. Classifying records into various categories.

C. Transferring important records to low-cost storage.

D. Establishing schedules for the periodic destruction of records which are no longer needed to conduct business activities.

These objectives, for the most part, appear to be readily attainable; but a complexity arises in that, in most business offices, a considerable volume of unimportant material gets placed or is intermingled with the important records. This non-record material is then transferred to storage along with the record material.

At this point considerable manpower can be expended to extract the unimportant records from the files, which is costly, or the non-record material can be permitted to use up storage space, which is

. . . and Cut Costs

wasteful. Here is where office procedures can take an active part in your records management program through extensive system studies.

Before discussing the benefits to be realized from office procedures, let's consider briefly the difficulties faced in our offices today.

In our modern and complex business offices, the amount of paperwork dealing with "things and people" almost staggers the imagination. All companies have basically the same types of records, but the variety of systems utilized to process this paperwork mountain is infinite.

Because of the ever growing volume and complexity of paperwork, the procedures man has emerged as one of management's answers to combat this costly phase of business enterprise. This came about when it was recognized that operating people simply do not have the time to do an outstanding job of management while simultaneously undertaking methods or systems studies to improve their internal operation.

To illustrate this shortcoming, let us review a normal sequence of events in most companies that involves several functional components:

- *A requirement is established for material or service.*
- *Quotations are prepared and sent to prospective bidders.*
- *Bids are received and a vendor selected.*
- *A formal purchase order is written.*
- *Material is shipped and received.*
- *Invoice is received from vendor.*
- *Receiving report is prepared.*
- *Accounts payable, purchasing, in various combinations, match documents and pay for material.*
- *Material is delivered to field.*
- *Inventory records are adjusted.*

This list is not necessarily complete, but it serves to illus-

The author taps his long experience in records management with the General Electric Company to explain in detail this highly important, timely, vitally necessary administrative function. Currently he is manager of office procedures at GE's Hanford Atomic Products Operation in Richland, Wash.

trate the point that each of these functions usually is headed up by a competent manager or supervisor whose primary concern is to discharge his phase of the business cycle. He has intimate knowledge of the records he must create, use, or pass on to the next function. He does not have the time, however, to review the entire business cycle to develop an integrated system that takes into account the records management aspects as well as all the other business requirements.

Two Major Functions

The major functions of an office can be defined as recording and reporting of information. Almost everything the office produces is either a record or a report. The category and individual destination given every item of information entering the office is a report to some person along the processing line as to where the information should go, and what should be done with it.

And everywhere, at every stage of the processing sequence, records are made.

Basically, the recording function represents the company's history. It involves responsibility for all the records the company may need at any time for any purpose. However, as we all know, many of our offices have run into difficulties for lack of good definition or analysis of their basic record requirements.

As the papers, the forms, and the flow of information have increased, the place or significance of any one piece of information has become more difficult to evaluate. Office personnel, not knowing in most cases what is safe to throw away, have taken to filing everything written.

As all office personnel are inclined to act as "squirrels," this creates a major filing problem, and duplication of records rears its ugly head, in that the same information is copied and filed again and again throughout the different phases in the office. As we can visualize, all of these records created or generated in our offices can create a major problem in records management unless detailed and comprehensive procedural planning is employed.

Here, then, is where office procedures can play a vital role in the control and management of records, because the proper time to eliminate unnecessary records is before these records are created, and the time to segregate record and non-record material is before it is filed.

To amplify this thought, let's take a look at the outline of a

systems study. We have five basic steps:

1. **Define the problem.** This, of course, must come first. It is necessary to outline a set of objectives with operating management as to what it is we are trying to accomplish.

2. **Detail the present system.** In our procedures work we start at the beginning in our offices or functions to determine what is our present system. We go to the point or points where each category of data originates. We follow each form or record in all its movements across the desks of all personnel and through every office where each form or record is routed.

In our tracing of the paperwork, we learn what each employee does, what each work station does, and how it is done. Flow charts are prepared showing the movement and use of each piece of paper and, in addition, samples of each form used are gathered. Organization is also studied, as this sometimes is one of the major factors of systems design.

3. **Dissect the system.** The data which have been gathered and charted are now studied to determine areas where system changes would be beneficial and economical. When designing new systems, it is essential that each step in the process be challenged as to why, how, when, where, who and what.

4. **Develop new systems and methods.** At Hanford we use the team approach in developing new systems. It is very important that one or more employees from the operation being studied be assigned to the study. We have spent considerable time and effort in selling this principle of participation to operating management and it has paid off handsomely in better systems.

Review Findings

Another technique we employ is that, although only one procedures man may be assigned to a study along with operating personnel and be responsible for its completion, when it comes time to develop new methods, the entire procedures staff including records management personnel, reviews the findings and makes recommendations as to better methods. It is this team approach that builds better systems.

Another very real benefit that is derived from having full time participation by operating personnel during a study is that the sting of having outsiders come in and ram something new and different down their throats is removed.

Oddly enough, resistance to change is no different today

than it was back in 1850 when the English editor, Walter Bagehot wrote:

"One of the greatest pains to human nature is the pain of a new idea. It is, as common people say, so 'upsetting'; it makes you think that, after all, your favorite notions may be wrong, your firmest beliefs ill-founded; it is certain that till now there was no place allotted in your mind to the new and startling inhabitant, and now that it has conquered an entrance, you do not at once see which of your old ideas it will or will not turn out, with which of them it can be reconciled, and with which it is in essential enmity. Naturally, therefore, common men hate a new idea, and are disposed to more or less ill treat the original man who brings it."

Once the new system has been developed it is time to make recommendations to management to sell the system. It is fairly obvious that if we have had participation of the operating personnel our job in this area is a great deal easier. One final step then can be outlined as follows:

5. **Do. We now apply the new method through:**

A. Recommendation—writing a formal report including details of costs and savings.

B. Selling—to management.

C. Understanding—everyone who will be affected by the system.

D. Installing—this must be a joint effort with procedural personnel assisting operating personnel in the installation.

From the steps applied in systems studies you can understand why we feel it is most important that records management be an integral part of office procedures. We have in systems work the golden opportunity to assist in the development of a sound records management program.

The advantages or benefits to records management which can be realized from paying special attention to forms or records during a systems study can be summarized as follows:

1. The opportunity to generate unnecessary or superfluous records can be eliminated.

2. Records can be categorized and administrative procedures established prior to time record is placed into operation.

3. Office files forwarded to storage should contain only important records.

4. Space required for office files and permanent storage should be greatly reduced.

This philosophy of systems planning has been followed by

our procedure organization at HAPO and beneficial advantages have been achieved. For example, studies were conducted of our accounts payable operation and our purchasing receiving operation.

Briefly stated, we had a condition where each function—purchasing, receiving, and accounts payable—was maintaining record files of the same basic data.

Through a redesign of the system *and* relocation, where necessary, of personnel we were able to accomplish the following:

- *Purchase order folders go directly to purchase order files where accounts payable and other groups have immediate access to them.*
- *Purchase order files have been purified to the extent that they no longer contain information that has no record value.*
- *The accounts payable file of purchase orders has been completely eliminated.*
- *The receiving report file has become only an office working file with no retention value. (The original being filed in purchase order file).*
- *Most important of all more than 3,000,000 sheets of paper per year have been completely eliminated from the system.*

The above outline has by no means covered all the benefits and savings that we have obtained from this study, but it does demonstrate very conclusively the one fact that is of most interest to us here at this moment, and that is: Office procedures and records management *are* very closely related.

Your procedures people are the ones who develop and write the procedures that are to be followed wherever paperwork is done. They create all the different pieces of paper that are required to implement the procedures they develop.

By far the largest majority of management personnel have never heard of a retention schedule, or given much thought to the long range disposition of the records they create. This is an extremely fertile area that has too long been overlooked.

In conjunction with this, it is often stated by managers: "Procedures personnel are nice to have if you can afford them," the implication being that they aren't an essential part of modern business.

If we relate the office operation to factory operations we see management insisting that the latest methods and equipment are utilized to, as they say, "Keep us in a competitive posi-

tion"; however, in looking at the office and its extremely high operating costs they are prone to pass it off as a necessary evil.

Good office procedures and sound records management will go far in being a major contributor to the profit picture if they can be used on a continuing basis and not turned on and off like a faucet.

At HAPO we have given recognition to this situation and have recently taken additional steps to strengthen our records management program by changing our organization pattern as follows:

The supervisor of records management reports directly to the manager of office procedures and participates in weekly staff meetings with other procedures analysts and specialists. This gives him the opportunity to benefit from discussion of current procedures studies and also to contribute his knowledge and experience in discussing the aspects of records management that are so important in procedures work.

To further strengthen our records program we recently assigned a procedures analyst who specializes in forms control and design on a full-time basis to the records management supervisor. This was done to bolster two deficiencies in our existing program.

- *In developing retention schedules, it was recognized that much of the material placed in storage had not been properly segregated at the source or point of origin.*

- *The information classified as vital records was duplicated in several instances because of lack of good forms design, and poor communication between functional components as to who had primary responsibility for the record file material.*

It will be the responsibility of the procedures analyst to make a careful survey of existing retention schedules and the status of each class of vital records.

From this beginning, he can ascertain what procedures need to be modified in the operating components to correctly segregate and identify the record material having identical retention periods. You are no doubt familiar with the situation where records for relatively short retention are intermingled with records for long retention, thus requiring retention of a larger volume of material for a longer period. We hope to make good progress in eliminating this condition, which in turn will more than repay the cost of the procedures effort.

Secondly, we expect the procedures analyst to exercise his knowledge of forms control in establishing new or revised forms. This will give the records management supervisor an excellent opportunity to exercise "birth control" measures and to review with each operating component the relationship of his source documents to the overall vital records program.

In addition, the procedures analyst can be instrumental in recommending the most appropriate techniques to be utilized in preparation of records material for off-site and on-site storage. Questions such as: What should be microfilmed? What reproduction processes should be used? Can be analyzed and evaluated?

Another important advantage is that the procedures analyst can relieve the records management supervisor of much of the load he had to carry in trying to resolve these questions. This will give him more time for overall planning and thinking ahead to tomorrow's opportunities and challenges in the field of records management.

Serious thought must be given to the advantages inherent in the application of procedures techniques. This new profession looks at complicated situations not as vexing problems to be solved, but as opportunities to develop better methods; to establish facts, rather than render opinions; and to provide what is wanted, rather than merely to state what is needed. The best answer as to what is a procedures man was written many years ago by Rudyard Kipling:

"I have six honest serving men, they serve me good and true. Their names are what and where and when and why and how and who."

Conference Notebook

MIDWEST WORK COURSE

Plant Layout and Facilities Planning Materials Handling Analysis

September 12-16—Town House Hotel, Kansas City, Kan. Sponsored by the Kansas City Center of The University of Kansas.

Inquiries: University of Kansas Extension Center, 39th and Rainbow Boulevard, Kansas City 12, Kan.

Here is a caricature on the shorter and shorter work day. Is it possible we're heading toward a five-day week end? Don't get your hopes up—it's possible, but not probable.

Next . . .

THE FIVE-DAY WEEK END

by R. O. Brotherton

"Where you workin' Willie?"

"Model Manufacturing Company."

"What shift you got?"

"One to five, the first Monday afternoon of every month."

"Man! Sure wish I could get some long hours like that!"

Sounds silly, doesn't it? It is too—today. In the not too distant future however, it may not be quite so preposterous. The trend, as well we know, is toward shorter hours. Automation is but one of the factors hastening the advent of a shorter day and week. There are those among us who have seen the 12-hour day give way to the 10, the 10 to the eight, and in some cases, the eight to the six. Why not the six to the four, yes, even the four to the two!

Such a development could have far-reaching effects. Where is it going to end? Are we going to have another Vanishing American in the person of Work Shirt Willie? Is the day coming when we will have to visit the Smithsonian Institution to see a dinner bucket? What will Willie of the future do with all his spare time?

There can be no doubt but what almost every aspect of our way of living will be affected. As an example: It will surely mean the end of night school. Why go in the evening when you have time during the day? TV sets will probably come without shut-off switches; there will always be someone to watch the 'round-the-clock programs. Labor Day of course, will come into its own—every week! Can't you just see the family operating in shifts through the night preceding Willie's day of labor? Just to be sure he doesn't oversleep.

The sporting world too, will feel the impact. Particularly

hunting and fishing. The time may come when the airlines will either re-route their planes or discontinue service entirely during the hunting season. The concentrated fire of millions of Nimrods (especially bird hunters), could well represent a definite hazard. The problem could of course be solved by replacing the regular aircraft with high flying bombers. Then too, unless an all-out campaign is instituted by the Conservation Department, game of all kinds is sure to become scarce. Imagine your TV program being interrupted for a special sports bulletin:

"A real live deer has been seen in the Rocky Mountain area," (or)

"News comes to us of a wall-eyed pike caught in Lake Fruitless in northern Ontario."

While that may be a slight exaggeration, there can be no denying the fact that even now our lakes are becoming more and more crowded. Some kind of innovation may be necessary. With boats oarlock-to-oarlock, we may have to steal a page from the ice fisherman's book. Possibly a glorified pontoon raft with a hole in the center to fish through, may be the answer.

Yes, the age of the five or six day week end will pose many problems. High on the list will be those having to do with married life. Imagine the stress and strain on the family ties if Willie elects to hang around the house all day! Even if it does result in the elimination of work clothes washing. Unfortunately, it will mean more time for our boy to run to the doctor with imaginary aches and pains.

It will be interesting to see what happens to people who now complain of "too many things to do and too little time to do them." More couch cases, no doubt. Politics too, will experience a change. Any office seeker, running on a platform advocating longer working hours, will have to be conceded a chance. Once elected, however, he may have to spend some time working at it. The voters might just decide to while away a little of their time attending political functions, council meetings, etc.

Trailer life will almost surely become more popular. Why not one job here and another one there? You may prefer North in the summer, South in the winter. There is sure to be sufficient travel time between shifts. It begins to look as though Work Shirt Willie will one day be treated in a manner much like that accorded the last survivors of the War be-

tween the States. Possibly even a statue in the town square.

It is to be expected of course, that we will have greedy people then, even as we have them now. It isn't too difficult to visualize a newspaper headline dealing with such a character.

"LABOR LOVER CONFESSES TO WORKING TWENTY HOURS IN SINGLE WEEK!"

Speaking of the actual work picture itself, many changes will be brought about. The coffee break will probably be one of the first of our present fringe benefits to be eliminated. Who is going to brook such interference during working hours, after waiting so long for his turn to toil? Certainly not work-starved Willie!

It is doubtful of course that it will ever reach the stage where Work Shirt Willie will be billed as a tourist attraction, or that trips to the moon between shifts will become commonplace. Unless you are a modern Jules Verne however, the possibilities for drastic change are still difficult to imagine. Can you honestly see yourself studying a vacation brochure featuring r e s o r t s equipped with all kinds of work opportunities? A veritable respite from leisure? The "come-on" might go something like this. . . .

"Spend your vacation at Fatique 'Mongst the Pines. Unfurnished cabins. Make your own furniture. Material and tools furnished. Well drilling equipment also available. No boats. Sporting goods (including hunting and fishing gear), not allowed on premises. Rates by month or year. Write Labor Lodge on beautiful Lake Perspiration."

Lest it appear that the entire situation is being approached with a tongue-in-cheek attitude, it might be well to sound a more serious note. This has to do with one of the more advantageous effects the shorter work week will have on the newly crowned pensioner. No longer will a sudden adjustment be necessary. The gradual labor lessening, covering a period of years, will serve to "housebreak" the retiring worker. As a result, the shock of suddenly changing one's way of life will be eliminated.

In closing, let us revert back to Work Shirt Willie's opening remarks regarding his monthly four-hour shift. Do not be unduly alarmed. It isn't likely to reach that extreme. The day may come however, when they do refer to the 1960's as the "old days when men actually worked an eight-hour day!"

How Valuable Are Foremen?

by William Gillick

Foremen, at one and the same time, have been consistently job-evaluated near the bottom of the managerial totem-pole and have been with equal consistency told that their jobs are among the most important to the industrial organization. What causes this? Witness the following scene.

Bill Greenly, the sub-assembly foreman, was called into his superintendent's office. After the usual preparatory remarks, the superintendent got to the business at hand.

"Your last performance appraisal, Bill, indicated that maybe you need some strengthening in managerial skills, particularly human relations." The superintendent talked on about communications, man-to-man relationships, growth on the job. But a wall was between them.

Bill Greenly gritted his teeth and did not hear much more because he remembered the last time they had a similar talk. It ended with Bill taking over a larger group of men and this looked like more of the same.

. . . . . For editorial comment please turn to* MANAGE FORUM, *page 4.

"So," the superintendent concluded, "we'll schedule the time and place and let you know."

On the way back to his work area, Bill Greenly saw a fellow supervisor who asked, "What did he want?"

"Oh," said Bill Greenly, "I got another 'think-big' injection. I need human relations." They both chuckled.

And this is at least one reason why foremen are low in the totem-pole. But there are other reasons too.

Thirty years ago—and with too much still present today—a man was promoted to foreman because he was the best worker. Today things are different.

Today's foremen are less "doers" and more "getters-done." And getting things done through others is infinitely harder than doing it yourself. Are foremen being properly evaluated for this requirement?

Anatomy of a Foreman

What is a foreman?

It all depends on who you ask, but it all boils down to a strong and meaty kettle of stew. Let us round up a few random views.

In a 1959 study, foremen themselves had one view, the workers another, and the foremen's supervisors still another. Only on a few items did all three viewpoints agree: developing subordinates, tact, discretion, planning, assuming responsibility, correcting poor behavior.

A 1957 study in several companies showed substantial agreement among workers. They expected personal consideration, with no favoritism. They expected foremen to be honest and trustworthy, to be technically competent, to be thoroughly acquainted with how well each individual in the group performed, and to be in control of the work group.

They wanted their foremen to be decisive and straightforward, to know what they wanted done. They wanted them to be self-confident, and when necessary, forceful. They did *not* want complete social fraternization.

Beyond this, in the same study, there were some disagreements. For example, some workers wanted frequent guidance, others wanted more independence.

A 1959 publication focused on this dilemma with this cover statement: "There's no formula. When you're dealing with people, throw away the book."

A 1958 study covering foremen and their immediate supervisors had this blurb: "The job has more scope than most foremen think."

And foremen are being told, "You are managers. You are to manage your section. You are responsible for budgets, costs, job methods, work simplification, record keeping for production, time, personnel," and on and on.

Many Skills Required

Nation's Business, in August 1959, talking of future managers spelled out the following skills a manager must command and execute: planning, initiating (changes, ideas, corrections, suggestions), delegating, decision-making, communicating, developing (people), relationships (with people), and standards (of performance, for himself and his people).

Just in the field of communications two writers from Pennsylvania State University, Zelko and Weaver, state that supervisors must know how to pass along information effectively, give instructions and orders, listen to employee problems and opinions. They must reprimand at times, and praise and encourage. And there are good ways and poor ways to do each of these.

In a 1958 publication an article appeared, "The Foreman's Role in Cost Reduction."

In a 1959 publication the following appeared on the cover: "The operating managers can make or break the contract." The article went on to discuss the effects of past practice, failure to enforce, failure to establish precedent, and zipper clauses.

And a professional negotiator spotlighted the full import of it when he said, "Remember, there's nothing in a labor contract that is *not* economic."

So what is a foreman?

Let us take a look at a real live job description, in existence today, at a midwestern plant. Note carefully the relationship of its contents to some of the foregoing.

A foreman, the description states, "is responsible for decision-making in planning, organizing, controlling, setting objectives, delegating, motivating, and evaluating results."

Within the confines of his supervisory area, however large or small, the foreman "organizes work load, makes assignments, gauges individual results, determines performance levels, instructs employees."

He "discusses and disposes of first step grievances, dealing with individual employees or stewards, and provides factual information to union committeemen investigating a grievance," and when necessary, "may administer constructive discipline."

He "controls and evaluates

department operations for cost savings and simplified methods and procedures," and "gathers and accumulates information, analyzes, writes reports, estimates budgets and manpower requirements, recommends occupational composition of his operation, and may represent the company with vendors, visitors, and the public."

This job description in addition clearly lays out the responsibility of the foreman for meeting schedules, coordinating his efforts with others, for the quality of the product, safety, housekeeping, communications, development of subordinates, utilization of staff services, and the personnel administration of his section.

All of this is in the foreman's job before we even begin to consider his required specific knowledge of machining, fabrication, assembly, receiving, shipping, warehousing, maintenance, tool and die making, or whatever else he needs for the job.

What is a foreman?

There should be no question about the fact that he is a manager. There should be little question about the fact that he is low on the totem-pole. And there should be no doubt that he has made some contributions to his own situation.

There is evidence that one culprit is job evaluation.

The job evaluator from the midwestern company whose job description is quoted above had this to say: "Too many job evaluation 'systems' measure the tangibles well, but they miss the intangibles. These 'systems' give weight to skills, knowledge, and techniques which are easily defined. The tenuous, difficult-to-define ones are lost in the shuffle. For example, how do you define and get a relative value for the ability to get work done through others?"

His eyes double-twinkled behind his thick glasses. "Let me pick your brain a minute. What relative value would you give to a requirement to organize and retain flexibility in an operation versus the requirement to organize and stabilize an operation?"

After waiting long enough to be sure that he was going to be ignored, he continued: "I'm going to make some enemies on my next statement, but here goes. Those requirements which are easiest to define, especially in terms of years of schooling, seem to rate pretty high. I'm referring to such things as a degree in accounting or engineering. Do you hear that rumble? That's the charge of the Light Brigade thundering my way."

Challenged with the state-

ment that top-level managers rate out on top, the job evaluator grinned. "Sure, but they are rated at a pre-determined top level in all factors as a courtesy, and no one under their direction can be rated as high. This isn't rating, it's rigging."

This job evaluator's boss, a director of personnel, had a few other ideas on the subject. "While I will agree that management has been guilty of traditional, rigid, and stratified thinking about the place of the foreman, I would also point out to you that the middle level production sachems, such as superintendents, have made their contributions to the plight of their subordinates, the foremen.

"Too many of these middle level men have been too busy wasting time on their undelegated problems and have failed to think big about the job of the foreman. It follows, then, that they have also failed to sell any new ideas to the big chief upstairs.

"It seems to me," he concluded, "that in industry at large, the foremen, their bosses, and their bosses' bosses, all need that 'think big' injection."

NMA CLUB ANNIVERSARIES

AUGUST

5 Years:	Alcoa Mobile Management Club	Mobile, Ala.
15 Years:	Birmingham Management Association, Inc.	Birmingham, Ala.
	Grayson Administrative Conference	Long Beach, Calif.

SEPTEMBER

5 Years:	Fostoria Industrial Management Club	Fostoria, Ohio
15 Years:	Armco Fabricating Foremen's Club	Middletown, Ohio
20 Years:	Staten Island Managment Club	Staten Island, N. Y.

by B. J. Speroff
Research Associate and Project Dire
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The decade has seen increasing emphasis on creativity as a dynamic factor in the processes associated with problem-solving. The central aim has been to tap the vast storehouse of unused brain-power by more effective means. To release this latent brain-power, sundry methods have been devised with, at best, modest success. Nonetheless, new and modified plans to promote inventiveness and ingenuity have taken hold almost like a woman's fad.

Brainstorming, a creature of the creativity search, is the most recent of the devices. Training people have taken to the use of brainstorming to resolve their sundry problems, to bring forth their esoteric needs, and to establish attainable goals. Basically, brainstorming is a free association process long recognized by psychologists and psychiatrists as an effective cathartic tool in therapy. In it full rein is allowed the mind to spontaneously

formulate and present ideas, opinions and thoughts without prior benefit of screening as to their relevance, utility, validity, purpose and truth.

Reasoning, cause-finding, evaluating and testing these spontaneous responses and reactions have no place in the brainstorming process as they do in systematic problem-solving. Operationally, brainstorming is predicated on the theory that the more proliferation of ideas the better; that, in effect,

Seldom has a tool for group use been introduced with such fanfare and promoted with such fervor as "brainstorming." The author feels, however, that true creativity of lasting value is a product of a company's permissive and encouraging climate rather than of any fad or one-shot effort. He lists nine company characteristics which foster inventiveness and vigorous imagineering.

Another "Gimmick"?

quantity begets quality. This requires a green-light, no-negative, inhibition-free, ideational atmosphere. No idea is challenged or criticized.

To the extent that brainstorming is really a product of group activity it taps the lifetime experience of each member of the group. Ideally, a chain reaction of spontaneous responses is triggered off. Each response elicits another, and another and another. There are variations in method as well as different arrangements of the group in order to fulfill particular objectives.

There are at least three types of brainstorming: group, subgroup and individual. The group methods consist of: (1) using the group *in toto;* and (2) dividing the group so that one-half assumes the "pro" side and the other half the "con" side, after which they reverse sides. The sub-group methods consist of two, three, or four individuals using: (1) the "tear-down" procedure wherein one man suggests an idea, the second suggests another idea, the third disagrees with both and puts forth his own idea; and (2) the "and-also" procedure which is similar to the "tear-down" method except that the ideas are agreed upon as being good, but needing to be improved upon or added onto. The individual methods usually con-

sist of homework assignments—to hand in a series of solutions and ideas.

Brainstorming Has Its Value

There is no question but that brainstorming has demonstrable value, that it can under proper circumstances be a potent force in creative thinking. Furthermore, a goodly number of organizations have instituted training programs in creative thinking, and the use of brainstorming as its chief vehicle, to enrich, revitalize, and develop the creative impulse of their people. In training programs—supervisory as well as executive—it has proven a most illuminating exercise in the development of creative effort.

Yet, once such exposure of training is completed, what happens to the creativeness of these people? It is stymied, sidetracked, talked away. It is lost or decimated by bureaucratic procedures, red-tape, defective communication, exigencies, and other obstacles. Thus, another good training tool has fallen by the wayside — another "gimmick" has had its day! At a time when creative thinking and problem-solving ability have never been more needed, brainstorming has failed to provide industrial management with a productive tool, except for instance in the advertising and public relations fields.

What is wrong then? Why hasn't such a potentially practical instrument proven effective? The crux of the matter lies not in the training of individuals, not in the unleashing of the creative impulse, but in the development and nurturing of a climate of acceptance and applicability of creative effort.

Is There Something Better?

What has curtailed creativeness, imagination, and boldness in most industrial workers in the past has been the absence of recognition, reward, motivation—and a permissive, democratic, accessible climate—rather than the failure to tap and unloosen the latent or repressed brain power. The creative, dynamic potential is there, and always has been; brainstorming merely served as an agent for reviving it under a different set of circumstances.

Brainstorming, as commonly employed today, can only be another "gimmick" at most. The real creative impulse which is imbedded in people requires no "gimmicks," no special appeals, no formal eclectic or didactic courses of training.

Creativity emerges and effuses if the proper climate or atmosphere exists—satisfactory labor relations, free and open

communication channels, interested and enlightened management, ego-satisfaction, etc. When the proper climate prevails, ideas, solutions and suggestions are brought to the attention of management spontaneously and informally, and considered, evaluated and acted upon. Suitable recognition, rewards and incentives are used, not as inducements or stimulants to creative effort, but rather to make fitting acknowledgment of the people's unsolicited initiative, derived from a sense of pride, regard, or interest in improving one's job, one's company, and one's self.

People Don't Spark at Command

True creativity and its derived byproducts can best be promoted and extracted, not by brainstorming nor by countless other one-shot efforts, but rather through the creation and existence of a democratic, permissive, and enlightened climate built upon reliance, trust, confidence, and good faith between management and the managed.

Opportunities for creativity and ingenuity to flourish may be available, and all the requisite talents may be present—either due to native endowment or as a result of educative processes—yet worthwhile efforts fail to materialize. This may be due primarily to the socio-authoritative climate existing in the organization. The best inventive and resourceful minds will not function properly unless the personal egodrive, motivation, is present and stimulated by an unselfish desire to be of service to an unselfish organization. This comes about when management invites actions and deeds, and encourages and accepts and applies the fruits of creative effort, and adequately rewards the inventive, the imaginative, and the bold.

The answer to continuing successful creative output will not be found in developing and training people to apply their creative minds, but rather through the purposeful cultivation and nurturing of the kind of industrial atmosphere where creative efforts erupt spontaneously and without straining. The creative mind does not produce on order, or by directive; nor are lures, inducements or training "gimmicks" essential to its functioning.

Signs of Favorable Climate

A climate conducive to unbridled creative output is generally found in an organization which possesses these characteristics:

1. Has provided for a liberal and progressive employee relations program;

2. Places primary emphasis on human understanding and safety above productivity;

3. Possesses sufficient organizational controls which are adhered to consistently and fairly; i.e., well-defined policies, objectives, lines of authority and responsibility;

4. Possesses a minimum of organizational barriers; i.e., buck-passing tactics, no formal policies, inadequate communications, red tape;

5. Practices the "open door" policy; i.e., accessibility and receptivity to suggestions, advice;

6. Allows individuals ample time to think about problems and needs of the organization;

7. Permits a challenging, competitive and rewarding atmosphere to exist;

8. Makes known and fully utilizes all channels of communication and permits access to all information, data, etc., except for confidential or classified materials;

9. Believes in the resourcefulness, wisdom, and creativeness of its personnel.

(Reprinted with permission from Personnel Journal)

"Do you mind? I just wanna see how it's gonna feel someday."

Bogey Golf...*or*...
How's Your Arithmetic?

by Robert Dale

It is only quite recently that I have taken up golf. In fact, I have only played for a couple of years, and seldom more than six games in a week, or at most two games in a day. I have only had a proper golf cap for one year, I only bought a spoon this year and I'm not going to get my plaid socks until next year.

In short, I am still a beginner. Under such circumstances I should have little to teach anybody about golf. But it has occurred to me that from a certain angle my opinions may be of value. I at least bring to bear upon the game all the resources of a keenly perceptive, if somewhat mushy mind. In particular, I may be able to help the ordinary golfer by showing him something of the application of mathematics to golf.

Many a player, it seems, is needlessly discouraged by not being able to calculate properly the chances and probabilities of progress in the game. Take, for example, the simple problem of "going around in bogey." The ordinary player, such as I am now becoming—the person in the no man's land between beginner and expert—necessarily wonders to himself, "Will I ever be able to go around in bogey; will the time ever come when I shall not make one hole in bogey, but all the holes?"

According to my calculations, the answer to this is overwhelmingly "yes." The thing is a mere matter of time and patience.

Let me explain for the benefit of the few people who never play golf (night watchmen, astronomers, sponge divers, and convicts) that "bogey" is an imaginary player who does each hole in the fewest possible strokes that a first-class player with optimum luck ought to need for that hole. Now an ordinary player finds it quite usual to do one hole out of nine "in bogey"—as we golfers cleverly call it—but he wonders whether it will ever be his fate to make nine or even 18 straight holes in bogey. To which we answer again with absolute assurance, he will.

The thing is a simple instance of what is called mathematical theory of probability. If a player generally makes one hole in bogey on the first nine, or comes close to it, his chance of making any one particular hole in bogey is one in nine. Let us say, for easier calculation, that it is one in 10. When he makes it, his chance of doing the same with the next hole is also one in 10: Therefore, taken from the start, his chances of making the two holes successively in bogey is one-tenth of a tenth chance—or one in a hundred.

You can already see how encouraging the calculations are. Here we can at least see some definite progress. Let us carry it further. The chances of making three holes in bogey one after the other will be one in a thousand; the chances of four, one in 10 thousand, and the chances of making the whole round in bogey will be exactly one in a billion.

Therefore, you can easily see that it is only necessary to keep on playing. But for how long? Aye, there is the rub. How long will it take, playing the ordinary number of games in a month, to play a billion? Will it take several years? Yes, it will.

An ordinary golfer plays about 100 games in a year, and will therefore play a billion games in exactly 10 million years. That gives us precisely the time it will require for persons like you and me to go around in bogey.

Even this calculation needs a little revision. We have to allow for the fact that in 10 million years the shrinking of the earth's crust, the diminishing heat of the sun and the general petering out of the whole solar system, together with the passing of eclipses, comets and showers of meteors, may put us off our game.

ACT ON FACT

by James Black

A better job opens up! Who to pick? Jones is capable and intelligent, but still a comparative newcomer. He has been with the company just two years. On the other hand, there's Smith. Slow, plodding, a competent workman, Smith has one big advantage—seniority. He is a 15-year veteran with a good employment record. While his performance has never been outstanding, it has always been acceptable.

Smith would make out. Jones would be excellent. But what would the union say if you gave Jones the nod? You know the store it sets by seniority. The labor agreement probably says that "seniority shall prevail when ability is equal." On ability Jones has it over Smith. But can you prove it?

Both men want the job. What's more, Smith thinks he is entitled to it by reason of his service. You know if you pass him by, there will be a grievance. The easy way out is to give Smith his chance and avoid the headache. Jones is still young and will have other opportunities.

But being conscientious, you want the right man on the right job, and the right man is the best man. Besides, Jones might leave if he thinks his skill is being overlooked. You don't like to lose him. It's a hard decision, isn't it?

Seniority vs. Ability

Supervisor Fred Matts (name fictitious) had to answer a question like this not long ago. His decision was complicated by factors other than the straight issue of seniority vs. ability in making a promotion. What he did, and the arbitration resulting from this act, provides a case example in handling problems of this kind.

An employee whom we'll call Joe Martin had worked for the "X" manufacturing company for seven years. He then re-

signed, canceling out his seniority. After a lapse of 12 months he sought reemployment. He had been a topnotch man, and the company eagerly rehired him. He had to go through the regular probationary period before his name could again be placed on the seniority roster.

During this "trial" time a job opened up in the extrusion department. Martin was the ideal selection. He had experience and "know-how," but not seniority. Three other employees besides Martin bid for the position. However, Supervisor Matts was determined Martin would be the man, and gave him the promotion.

The other employees filed grievances, contending the selection of Martin, a probationary employee, violated the agreement. The contract clause governing this matter read in part, "If action taken by the company shall involve the filling of a job by an employee not entitled to hold it against the bid of another employee having greater seniority and equal ability, any pay differential between the jobs shall be paid to the aggrieved employee retroactive to the date of the grievance."

You may consider this proviso a handicap to management and wonder why it was ever accepted. But there it was in the contract as big as life.

The Issue at Arbitration

The argument finally came before an arbitrator. It was up to him to decide, "Did the company violate any provision of the agreement when Supervisor Matts assigned Fred Martin, technically a probationary employee, to the vacancy of an operator in the extrusion department? If so, what was the remedy?"

The union contended, "Supervisor Matts violated the agreement when he bypassed three regular employees who bid for the job and selected a probationer. These men were just as qualified to do the work as Martin. The labor agreement states that seniority will apply in the filling of new jobs or vacancies. It also stipulates that the employee must have the ability to do the work.

"There is also a cooperation clause in the contract," continued the union, "designed to strengthen good will between the company and its employees. Supervisor Matts violated this clause when he promoted Martin over the heads of faithful workers. After all, Martin had quit his job, whereas the grievants loyally remained at work. Why should he be rewarded

with a promotion shortly after he is rehired?"

The company made the following argument: "We acknowledge that Martin has no seniority, but our union contract permits us to consider both seniority and ability when we promote. Martin is by far the superior man. The grievants are only machine operators and have had no experience, such as Martin has had, as leadmen or operators in the extrusion department.

"The contract says that 'when ability and seniority are equal, seniority shall prevail.' However, when the ability of one employee is far superior to that of another, the company has the right to promote the better qualified man regardless of seniority or lack of it. It was on this principle that Supervisor Matts acted."

Ruling of the Arbitrator

The arbitrator ruled: "It is obvious from evidence that Martin was best qualified for the promotion from the point of view of experience, ability and knowledge. If the question of seniority were not involved here, there would be no case.

"However, the contract reads that three factors shall be considered in promotion: seniority, ability, and physical fitness. A careful reading of the provisions convinces me that a job candidate must possess all three qualifications—at least in varying degrees.

"Martin had no seniority at all. He was a probationary employee. The contract states that no 'probationary' employee shall be considered a 'regular employee.' Therefore, Martin actually had no right to bid for the job. He was not eligible for this promotion if there were other qualified employees who wanted it. True, the union's argument that Supervisor Matts violated the 'cooperation' section of the contract has no merit. But when the other facts are considered, I must rule that the company did breach the seniority provision when it promoted Martin.

"The remedy: Management will decide which of the three grievants who bid for the job is best qualified to hold it and promote him to it. It will also grant him the difference between his rate and the extrusion operator's rate for the period that Martin has held this position."

A Look at the Case

Management lost this case "hands down." It was prevented by the union agreement from assigning the best qualified employee to an important shop job. Supervisor Matts—from

the point of view of productivity, operating efficiency, and the general welfare of the department—obviously made the right selection. But his decision was reversed because he did not regard seniority.

When a company depends on the "ability" argument to move one employee ahead of others who have greater seniority, it must be able to prove its case. *For the burden of proof is on management.* It must be able to cite records, point to skills, and in every way demonstrate that its decision was a reasonable one. A shade of difference in ability is generally not enough. It must be shown conclusively that the low seniority man is superior to his rival in every respect.

Supervisor Matts had another factor working against him. His candidate had no "seniority" at all. The record doesn't say whether the personnel department was consulted before the decision was made to promote Martin. If it was not there was a labor relations slip-up. For the arbitrator was technically correct when he pointed out that the agreement provided that three factors be considered in promotion—seniority, ability, and physical fitness. If a candidate was totally lacking in any one of these three qualifications, it is obvious that he would be ruled off the track by any arbitrator, since, in his capacity as a referee he must base his judgment on the written contract and his interpretation of its clauses.

Furthermore, Matts should have anticipated that there would be resentment among employees if Fred Martin was welcomed back to his job with a promotion over the heads of the men who had stayed with the company.

You can understand the father who welcomed back the Prodigal Son with a big celebration. But you can also appreciate the human resentment of the older brother who had stuck around the house doing the chores while he was gone.

This observation is no argument that seniority should prevail over merit. It shouldn't! A supervisor should always do his best to reward superior performance with promotion. At the same time, he should use tact and judgment in doing it. If Matts could have at least waited until Martin resumed his place on the seniority roster, he might have avoided a difficulty. If he couldn't hold the job open that long—well, there would be another chance for Martin later. In any event he should have reviewed the union contract before he made his move.

This case illustrates how important it is to make certain you can back your decision with fact if you decide to jump a newcomer to a better job over the head of a "qualified" old-timer. It's up to you to prove your man is superior. Unions cherish the principle of seniority and will go to the mat on this argument almost every time.

This case is based on one described in the Labor Relations Reporter. It has been altered slightly to illustrate certain principles of supervision.

"I hear they're moving me upstairs . . ."

ALCOHOLISM IN INDUSTRY

by Donald Robinson

MANAGE *this month starts a two-part series on the problem of alcoholism in industry.*

Last year the Alcoholism Research Foundation conducted exhaustive sampling of the use of alcohol and came to the conclusion that 6 per cent of the employees in the industries studied had a recognizable problem with alcohol. Supervisors in all industry must face this situation squarely.

Each individual with this problem missed an average of more than 18 days of work a year. That represents a lot of money to your plant or business. But at the outset let's make one thing clear. *We are not going to give a patent solution to this problem.*

This month we will study some of the contradictions involved in recognizing alcoholism. Next month we will discuss one approach toward the solution.

The first step for any manager or supervisor is to recognize that his company has a problem and admit it. This may sound strange to you, but the same survey by the A. R. F. found that at some of the plants where the impartial observers recognized a problem, management refused to admit it existed. Others admitted it and were at a loss to know how to start a cure for this diseased condition in their organization. Still a third group admitted the problem and took trouble to establish programs to meet the challenge. Some programs show imagination and are making good progress.

Recognition of the Problem

Because beginning alcoholics are usually nice, quiet fellows when they are sober, with family responsibilities, supervisors tend to cover up for them at first. In fact, it is amazing how long a supervisor and fellow workers can cover up. Cases are not uncommon where a man

has been developing into an alcoholic for the past 20 years and the fact only comes to the light when a new supervisor gets him. A supervisor who either wants to help him or wants to get him off the payroll.

The first cardinal rule in helping alcoholics in industry is *recognize them.*

How shall we pick out an alcoholic and what is he in the first place?

An alcoholic is a sick individual. He or she is one in whom alcohol acts as a poison in a way somehow different from the reaction of alcohol in a normal person. The exact chemistry or the inter-related psychological reaction is not fully understood. Plant administrators must turn to their plant physicians for help in this matter and an explanation of the disease rests between you and your plant doctor. We, in this article, are out to spot the offender.

Several signs point to the employee who is on the road to alcoholism. First, the incipient alcoholic will be found to be taking a few more drinks at parties than the average drinker. Then he will be coming early and staying late at gatherings where alcohol is served. Surprisingly enough, company functions are good diagnostic centers.

The next step is drinking alone. Of course, it takes a plant manager or a supervisor some time to learn this but it will come out! Signs of this? Monday absenteeism, odor of alcohol on the breath during working hours, hangovers of greater magnitude than the average. And one strange tip-off; during the period an employee is becoming an alcoholic (and it takes a long time) he might become very meticulous in his work. Slower, perhaps, but very meticulous. He studies each item with undue care, for he is covering up . . . or trying to.

The final stage (let's hope you recognize him before this step) is absence of several days at a

It doesn't take a very sharp supervisor to spot an alcoholic but it takes true genius and courage to do something constructive about him. Next month's article will discuss one approach to this, as well as some general avenues open to all trained men.

time, more and worse hangovers, home problems, and a decreasing care in his dress. At this point you have an alcoholic while the employee suffers withdrawal symptoms. We think of withdrawal symptoms as being associated with narcotics users. If you keep them away from drugs they are addicted to, their bodies, accustomed to the narcotics and the effect of them, suffer the torture of the damned. The only immediate relief lies in taking a dose of the drug. Contrary to popular opinion, alcohol acts as a narcotic and not a stimulant. It depresses, and when a man is an addict to alcohol the cure for a hangover is a morning drink . . . so he takes one.

To anyone who has recognized and observed the problem of the alcohol in industry, it is always a source of amazement to find men who have progressed to the last stage above still held on payrolls and frequently not known to any but the men who work with them. This is true, time and time again, and even in companies with progressive alcoholic rehabilitation programs.

More amazing, but also common, is the supervisor or man high in the company who is an alcoholic or a borderline case.

Consider what the presence of the alcoholic in a plant or administrative organization can mean. Of course, it means lost time by the individual and all the needless expense. Let's say he is making just $2.00 an hour, and he only misses the average 18 days. (He will miss many more in the advanced stages.) That's $288 a year you pay him for not being on the job. In money, think of the sick benefits, insurance, etc. you pay. Is it 30 per cent more, or 50 per cent?

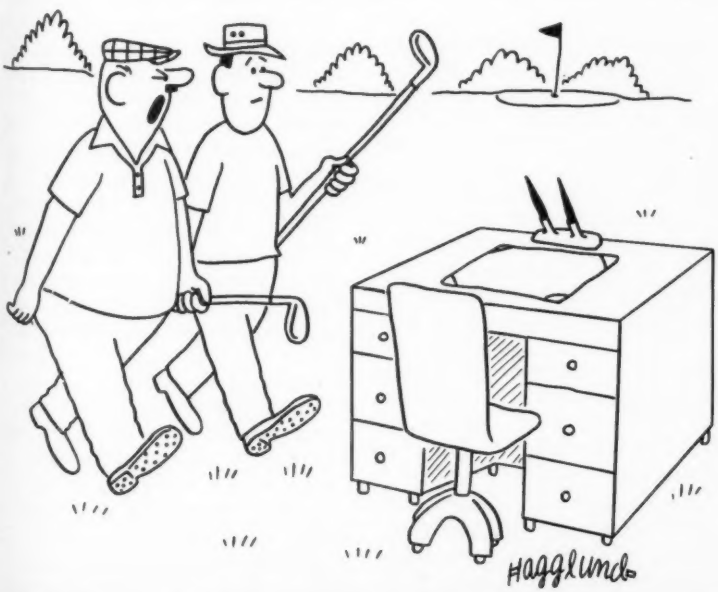
But if money were all we were talking about, we would not really have a problem. Worst of all, the effect of the alcoholic is the effect on your other workers who are sober. Doing extra work with no recognition for it. Covering up, which is embarrassing and underhanded. Worry about their own safety with machinery in

Coming Next Month . . .

- √ Organizational Effectiveness Under Stress
- √ Executives! Sought, Bought, Misused
- √ Live the Split-Level Life
- √ Business in Politics

the hands of one who is not always responsible. The mental health of your entire plant is knocked off base by alcoholics. And the entire plant, Mr. Manager, is more important than any one person in this case. Yet, like any other phase of industrial health . . . *What is good for your whole organization is good for the individual or vice versa.*

Again, if you discount the feelings of your sober employees, and even cover up for an old friend, think of the safety angle. Alcohol is incriminated in more accidents . . . on the road, in the plant, or at home . . . than we like to admit to ourselves. Accidents involving even those who are "social drinkers." But many workers either go on handling dangerous equipment while becoming alcoholics or are taken off the dangerous jobs and still kept on duty in a limited capacity.



"We finally got the greens committee to agree to them—it sure makes contract signing a whole lot easier."

BOOKS IN REVIEW

THE UNCOMMON MAN

by Crawford H. Greenewalt

This month's selection is reviewed by Carl Hepola, NMA supervisor of development.

This month we offer a change of pace, not to stray from our interest in management but to include some considerations of the manager's social setting. This very readable, and enlightening book by Crawford H. Greenewalt, president of E. I. du Pont de Nemours, represents the third series of McKinsey Foundation lectures held during the spring of 1958 at the Graduate School of Business of Columbia University.

Greenewalt addresses himself to the problem of the individual in the organization. His major thesis is that the average individual, upon whom any human association depends, must be encouraged to over-reach his "expected" contribution if organizations, nations, societies, and civilization are to prosper and advance. Organizations of any size and variety can have debilitating effects upon individual performance. Not because they are organizations as such, but depending upon the atmosphere for achievement, that is, or is not, promulgated within its context. Greenewalt draws some important distinctions between the conformity necessary to good manners and cooperation, as opposed to conformity of thought.

But the problem of performance has roots other than the conformity issue, and incentives and rewards are of utmost importance in motivating individuals to seek higher levels of achievement in an organization. Our author has some respect for financial incentives. It is paradoxical, says Greenewalt,

that although we demand excellence, we detract from the incentives by penalizing the successful individual with tax policies that effectively destroy the incentive. He is cognizant of the changes that have occurred on the American business scene, and the need for a system of recognition for managers and executives consistent with the atmosphere for achievement that should be engendered within the organization.

All in all, Greenewalt makes some cogent observations about the strength and weaknesses on the executive management scene, and we might add that he is well read and supports his ideas with references to Thoreau and Darwin, and all the way to Emerson and Adam Smith. He does a fair piece of work in defining the "undefinable nature" of the executive function, and clarifying some stereotypes of business. His comments upon the sad result of vanishing philanthropists are enlightening and do argue for the social utility of wealth. Although Greenewalt is not a prognosticator, he does make some comments about future science and research, those of special significances to human problems.

All in all, a good volume, not too long, and with some good food for thought that we can digest through the summer months.

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EXPANDING OUR HORIZONS

by Howard Arnett
Executive Vice President, General Electric Company
Portland, Oregon

"Expanding Our Horizons" is a subject I hope stimulates you as much as it does me. It is a matter of primary concern to all of us, for our progress is directly concerned with our ability along this line. Only through pushing the limits of our understanding to the maximum of our ability do we bring increased illumination on the things that we only dimly perceive, and the things that are still unrecognized.

I will attempt to trace some of the trends in management practices and thinking that seem to be running strongly, discuss briefly some of the work of management and the skills required and then see what we might do to prepare ourselves along this line.

It does little good to work for what we think exists now. By the time we prepare for it, the situation will have changed, and change it will, for this is a dynamic world and there's no such thing as a static status.

Now, let's take a good look at some of the dominant trends of the clear management picture. Probably the most interesting and the most discussed trend, especially during the post war period, has been this strong trend toward decentralization in practically all industries. This has no doubt risen from the fact that managements everywhere have tried to emulate the large company such as General Motors, in particular, which has enjoyed considerable success from their application of a high degree of it. Decentralization has caught on so well that it's practically practiced with religious fervor and there's plenty of evidence that some people have adopted it without realizing exactly what they were doing, and the consequences arising from it. Now, as a result of this, we've begun to witness a re-appraisal of decentralization. People are beginning to wonder if they didn't go too fast down that road. This

Here is food for thought. Accept it from an executive who has followed his own precept for getting ahead on the job with great success: "Grow to be too big for your job." This condensation of a talk by Mr. Arnett, was made at the fourth annual Zone A Executive Officers Conference in Death Valley, Calif.

has slowed down this trend into decentralization and there's some sort of a balance between centralizing and decentralizing in the making. However, over the long haul the trend still is in favor of decentralization in industries.

Concurrent with the trend toward decentralization has been a continued growth in specialization as a result of more and more technology. This isn't anything new to you. You all understand how these constantly new functional specialties keep growing out, how we develop these new things and new ways of doing things. Specialization is differentiation of work, that is, you're chopping up the job just a little bit finer as you go along. This brings about the problem of integrating this whole thing together. You can chop it up in little pieces and then you've got to put it back together, and that means that we need more and more people who can do this integrating job to hold the thing together. That's a coordinating job.

This integration is primarily a matter of coordinating and that is the job of the generalist. Training the generalists seems to be one of the real big challenges of management today. If you chop the job up into pieces you have to do actually as good a job to glue it back together again and to end up with a whole job. There will, however, be continuing efforts, I'm sure, to solve these particular problems. Two of these problems are: developing these fellows that understand the whole thing, know a little bit of everybody's job so they can make things happen at the right time and do a good job of coordination. The other one is to adequately take care of the specialist. He says, "The only way I can get a raise in pay is going into management." He says, "I honestly don't think I am a manager, I much prefer to be a real good engineer or something, but I want to be adequately compensated." That seems to be one of the other major problems.

Another well recognized trend is the automation and mechan-

ization wherever possible of purely operational functions, things that lend themselves to programming and planning. Now, the move has done much to shift the working population in recent years. It has been so effective that white-collar workers now out number blue collar workers and the gap is increasing steadily.

The effect on the structure of organization is generally to decentralize line functions and to cause staff functions to grow at a faster rate than the purely operative functions. The complexity of problems and the number of problems requiring more and more staff work has caused staff work to grow faster than line work, and in this constant differentiation of both line and staff functions, a relative amount of decentralization of authority has been necessary. In other words, more and more delegation has been demanded.

The effect of all these trends has been to flatten organization structure. If you look at structures as they were 20 years ago and what they are now you have a steep pyramid which has steadily been flattened out. This obviously simplifies communications from the top to the bottom of any organization and also increases the problem of coordination. It's like a guy in a chariot with about 20 horses pulling on the lines. How does he keep them all together? It's real rough. The only answer that is possible, of course, if chaos is to be avoided, is that management must be carried out more by objective than by directive.

"Share the Vision"

Every person can be given just a little more authority or a little less than some other person. It depends upon the individuals involved. The true degree of delegation that is possible might be stated as a measure of an individual's ability to perform satisfactorily within the framework of his responsibility.

There should be such a diffusion of management that everyone not only "shares the vision," but contributes to the fullest degree possible. I know this sounds Utopian, but I feel that there are certain strong trends running in this direction which will mold the future in a pattern that takes us a long way down the road toward a goal of more individual freedom of action.

There is another very important aspect that I would like to bring into the discussion, and this has to do with our economic duel with the Soviet Union. In this respect, the maximum exploitation of the managerial

abilities of our people will be decisive. In other aspects we are very much even-Steven, I would say. They actually have us on population and many other categories. This is real competition because those people are trained a lot better than I had first realized. Our counterparts in the Soviet Union get a better training, both technical and practical, than we do. We do enjoy one basic advantage and that is our system practically demands diversification, while their system cannot really tolerate it. Through this diversification, we should be able to realize a degree of participation and contribution on the part of our people that is not possible in the Soviet Union.

Three Key Skills

To get closer to the core of our problem—management development—let's review briefly the work of management, and what are recognized as the primary skills required. In carrying out this work of management there are three principal skills—technical, human, and conceptual. The technical skills obviously are very important at the operative level, right down where you are doing the physical work. The second skill, human relations, comes into play the minute you take on any kind of a supervisory or managerial position. This skill increases while the technical skills decrease as you start moving up. That, unfortunately, seems to be one of the problems of engineers, giving up technical skills. As a manager moves towards general management, the conceptual skill—the ability to see what the organization should look like 25 or 30 years from now—increases, and the human become a little less. At the very top it is very secondary and technical skill becomes third in line. Thus we say the skills required are shades of all three as one progresses through the organization and they point the direction to the kind of training needed as you move up.

Advancement is not as simple as it might sound. Moving ahead, as I envision it in management is more a matter of expanding laterally to broaden our skills in general knowledge. The acquisition of a broader sense of knowledge and a certain amount of relinquishing of technical skills is needed to accommodate the new skills we are beginning to take on.

The important question now is how do we pursue this personal development? The technical work comes usually from the job itself, or we have had to get it in a kind of training

process with a certain amount of in-plant training and personal study on the outside. Personal development in management outside the organization usually takes form in executive courses, at schools, colleges, individual effort, and through the work of professional and business societies and associations.

More Art than Science

Management has been referred to as both an art and a science, or a combination of the two. As a science it must obey exact rules which are known to be basic truths. As an art it is essentially the application of the basic knowledge we possess, and art implies the making or doing of something. In this sense it is a practice. Most people have done a good deal of thinking on this and there has been quite a bit of argument on whether management is an art or a science, but most of the people seem to come to the conclusion that management is about 80 per cent art and about 20 per cent science. If this is true, then I think it would be wise as we practice management concepts and principles to regard ourselves as artists attempting to create a reasonable facsimile of some perfect model we hold in thought. In acquiring the skills of management we learn primarily by doing because of the fact it is so much an art—for although we can study and visualize these concepts, they certainly cannot become ours until they evolve with our experience. We can only become what we understand and we can only understand that which we can perform.

On-the-job training could be much more effective for such thinkers. Referring to Ralph Cordiner, chairman of the board and chief executive office of General Electric, he points out that about one-third of a manager's time should be spent training his subordinates. He feels that managers should be three deep in their replacements. I think this is a good deal in excess of what exists in most organizations, but I don't think two deep is a bit too much. The degree of on-the-job training that is possible is largely a measure of the kind of supervisor present. If this supervisor is in harmony with the present concepts of development training, much can be accomplished through this apprenticeship type of training. At best, however, it leaves a lot to be desired. The best place to obtain this training, from my own experience, is in the professional societies of which the National Management Association is a good example.

In associations such as the NMA, which is designed to promote the very type of growth with which we are concerned, you have the opportunity to consciously acquire the skills that I picked up from my association as a by-product. Your association provides the kind of vehicle you need to experiment with the many concepts and ideas which you read about in a situation which does not present the hazards and deterrents which would be present on the job. While it is admitted that this kind of training (association centered) is not the exact replica of on-the-job training, I do believe that it is much superior to the so-called simulated management games now in vogue.

Demonstrate Right Attitude

In discussing association work I would like to emphasize one very important point—progress is very much an individual matter, like salvation. We all go to church on Sunday. We go there collectively, but we get the good individually. Each individual must work with his own goals, using the tools and opportunities that are extended him along the way. Those who are ambitious but would think in terms of measuring themselves in the terms of the group as a whole I am certain will be disappointed. So let us think of our association work and activities as an opportunity to contribute to our general pool of knowledge and experience from which we can extract those things that we need. This giving and this taking from this general pool are related. We generally get about what we contribute. That is a well-known fact. It has been said that you can't really teach a person anything in the sense of implanting a concept in his mind. All that can be done is to explain how the situation appears to you and hope that the interest will be sufficient to open the gates of understanding on the part of this individual and allow an impression to be made.

It seems to be the nature of things that opportunities we never knew existed will often present themselves if we have demonstrated the right attitude and taken the proper steps. So, if we make the course easier, and we all want to do that, let's think of personal growth as an end in itself and not as a means to satisfy a less worthy desire.

Let us put growth and personal development first and view it as Abraham Lincoln did when he said, "I will study and get ready and perhaps my chance will come."

NEWS *at a Glance*

15 Days in Space Ship

Locked in a flight station in the Lockheed Human Factors Research Laboratory near Atlanta for 15 days, a Strategic Air Command pilot from Elgin Air Force Base, Capt. William Lane of Gadsden, Ala., works on space-travel type problems while all of his reactions are recorded.

He was one of two SAC crews who worked four hours and were off duty two hours, around the clock, in the lengthy experiment conducted for the Wright Air Development Division's Aero-Space Medical Laboratory.

Test results may show that fewer crew members will be required to man rocket ships, thereby reducing the power needed for launching, and advancing by years man's exploration of outer space.

Dolphins Go to Fish School

Navy-Lockheed Polaris "Dolphins" are making giant cross-country leaps on their way to sea. Full-scale launch test vehicles, spawned at the Van Nuys plant of Lockheed Missiles and Space Division, have been flown to Groton, Conn., for installation aboard the first fleet ballistic missile submarine, the U. S. S. George Washington.

The Dolphins first attend "fish school" in Southern California waters off San Clemente Island.

There they learn to leap from beneath the sea, send a stream of water high overhead, stop dead in mid-air, and float on the surface until caught by Navy fishermen.

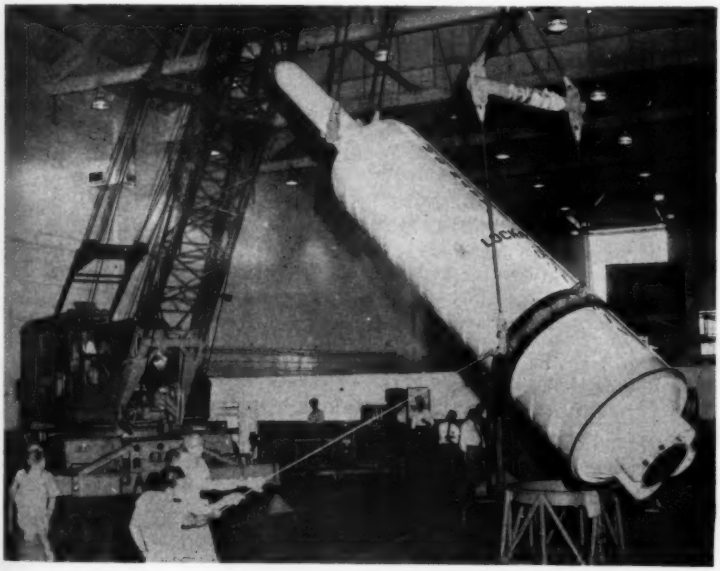
The Dolphin's job is to prepare the crews of the George Washington and subsequent Polaris submarines for launching live solid-fueled missiles. The Dolphin launch test vehicle has the diameter and overall length of the Polaris missile and resembles it in general appearance when fully assembled. It also simulates all Polaris launch characteristics, such as weight, center of gravity and pitch moment of inertia.

In addition to its training role, the Dolphin is also used to check out all submarine launching systems before insertion of live missiles, and to determine underwater trajectories of missiles in sea conditions ranging up to hurricane force.

Kidney Cooler

The medical profession has witnessed an example of how space technology can enhance surgical techniques in the operating room.

During the American Urological Association Convention in



Chicago, a new surgical apparatus was displayed for the first time which is designed to refrigerate and preserve human kidneys during surgery.

The Garret AiResearch Manufacturing Division produced the surgical heat exchanger, in a cooperative program with Dr. A. Cockett. Applying knowledge gained in providing environmental systems for Project Mercury manned satellite and the X-15 space vehicle, The Garrett Corporation apparatus employs a principle of liquid-to-liquid heat exchange in a new method of local kidney hypothermia. (Hypothermia is lowering of the body temperatures to reduce metabolic requirements, usually permitting surgery for longer periods as blood flow is lessened).

Principal conclusion drawn by Dr. Cockett in clinical tests is that the kidney cooler allows at least twice the amount of time formerly possible to perform an operation, reduces blood loss and the amount of blood present in the area of the operation.

Mist Coolant Device

The DeVilbiss Company announced a new mist coolant device, featuring an intermittent spray, that is now available for drill presses, saws and other cutting tools. The intermittent

feature, previously available only in the most expensive equipment, eliminates waste of coolant and air, and provides for cleaner operation because the mist is off during loading and unloading operations. Some advantages of the new DeVilbiss Multi-Mister include longer tool life, easier-handled chips and better finishes.

This exclusive DeVilbiss design cuts off the mist at the end of an operation and re-starts the mist immediately at the resumption of work through coordination of an air valve with the machining operation.

Turbine-Powered Fire Trucks

The world's first gas turbine-powered fire trucks have been ordered by the cities of Seattle

Lamps Wear "Overcoats"

Yes, at least two locations in the nation are so cold that even the fluorescent lamps must wear "overcoats." Both are cold storage plants, one in Florida and the other in Ohio. In each sub-zero temperatures are maintained for the protection of frozen foods.

Glass-jacketed fluorescent lamps, recently introduced by General Electric for outdoor lighting in temperatures up to 20 degrees below zero, are employed in the two plants to provide adequate lighting levels.

Designated T-10/J, the new lamps deliver peak light output at this 20 degrees below temperature, and perform efficiently both indoors and out-of-doors.

and San Francisco fire departments. Both fire trucks, built by the American LaFrance Corporation, Elmira, N. Y., will be powered by a 325 horsepower gas turbine produced by the Boeing Industrial Products Division of Seattle.

The large aerial ladder truck has a gross weight of 32,500 pounds and the pumper weighs 30,000 pounds.

Turbine power will provide several important advantages to future Seattle and San Francisco firefighting. The Boeing turbine has high torque performance at low speeds. This will give the fire apparatus improved acceleration and hill climbing capabilities. The turbine fire trucks will be able to move through city traffic at a faster overall speed and the trucks will be able to accelerate from zero to 55 miles per hour in 34 seconds.

Versatile Plastic

Dozens of everyday mounting, holding, anchoring or posting tasks are made easier with a new plastic substance called Delkote Solid Tak. It sticks indefinitely to any clean, dry surface; yet it can be removed in seconds and reused as often as desired.

The material literally transforms any clean, dry surface into a bulletin board or display. Since it isn't affected by water or variations in temperature, it can be used indoors or out in any kind of weather.

Besides the more obvious jobs it can be used as a means of temporarily positioning parts for welding, soldering, adhesive bonding or final assembly; it serves as an extra pair of hands, even holds objects weighing a pound or so on vertical surfaces.

by Henry N. Ferguson

WHITE HOUSE JINX

Will 1960 spell the end to the strange enigma that has haunted the White House for 120 years?

The man who wins the presidential election this year will be defying the strangest jinx in American political history. This fact, however, is not expected to deter those bitten by the "presidential bug."

Nevertheless, for the past 120 years a diabolical hex has been cast over the White House, claiming the lives of our presidents with sinister regularity. Beginning with 1840, the president elected every 20th year has died in office, six in all. Three of the six were assassinated.

William Henry Harrison, the hero of frontier days from the Ohio River to the Great Lakes, was elected President in 1840, the oldest man ever voted into this high office. Thursday March 4, 1841, was a cold and miserable day for the swearing-in ceremonies, which took place

on the east portico of the Capitol. Harrison rode a white horse to the affair, refusing to wear hat or coat despite the cold and stormy day.

Standing in the bitter weather he delivered the longest innaugural address on record, requiring one hour and 45 minutes. Immediately afterward, he led the inaugural parade to the White House and that evening attended three inaugural balls.

But the day's strenuous activities and his exposure to the elements were too much for Harrison. He caught a severe cold, and on March 27 came down with a chill. He died at 30 minutes past one on Sunday morning, April 4, exactly one month after taking office. His death initiated the strange chain of events that, with measured precision, has since claimed the lives of five other presidents.

At 4 p.m. on Good Friday, 1865, a scant month after beginning his second term in the White House, President Lincoln climbed into the buggy beside his wife, tucked in the corners of the robe that lay across their laps, and clucked the team into a trot. Leaning back, he grinned at Mrs. Lincoln, and told her he had not felt as good as this, nor been so happy in a long while. When this second term of office was over, he said, he wanted to buy a farm back in Sangamon County, Ill., where they could live out their days in peace and comfort.

He was 15 hours away from the death that was to mark him as the second victim of the ill-fated Presidential jinx.

Oddly enough, Robert Todd Lincoln, the President's eldest son, was to play a part in the three jinx deaths brought about by assassination. A soldier in the Union Army, he arrived home on the evening of April 14, 1865, and was told that his parents had gone to Ford's Theater. He went there to join them and as he entered the theater met a group of men carrying the wounded President to a house across the street. Robert was one of 25 persons present when the President died the next morning.

In 1880, James A. Garfield won the presidential election and Robert Lincoln became Secretary of War in his Cabinet. On July 2, 1881, the President was preparing to leave on a tour of New England and requested that Lincoln accompany him. However, the Secretary had urgent business at hand which necessitated his remaining in Washington. As train time neared, Lincoln hurried to the depot to inform his chief of the fact. Meanwhile,

President Garfield was talking with friends in the railway station waiting room. Outside, a crowd had gathered to watch his departure. In its midst stood Charles Jules Guiteau, who, as soon as the President started for the train, pulled a pistol from his pocket and fired two shots at him.

Garfield suffered for 80 days before dying on September 18, the third man in the jinx chain.

Another 20-year period passed, and William McKinley was elected to his second term in the White House in 1900. By now the jinx was in full sway, and Lincoln's son was still involved.

On September 6, 1901, President McKinley was invited to be the guest of honor at Buffalo's Pan-American Exposition. He invited Robert Lincoln to go along. Lincoln accepted, but his mind was filled with a strange foreboding.

The festivities at the Exposition moved along to their climax. Suddenly two shots sounded. Anarchist Leon Czolgosz had pumped two fatal bullets into the body of the President. McKinley lived another eight days before becoming number four in the macabre White House drama of death. As for Robert Lincoln, although he lived until 1926, he refused ever again to see a President of the United States.

Twenty years later Warren G. Harding won the 1920 election. In the summer of 1923 he began a speaking tour across the United States and to Alaska. The President, already tired, became ill on the trip back from Alaska. On the evening of August 2, he was in his room at the Palace Hotel in San Francisco. Mrs. Harding was reading to him. Suddenly, a slight shudder passed through his frame; he collapsed and died instantly, victim number five of history's most fatal jinx.

At 5:45 p.m. on Thursday, April 12, 1945, a "conference call" went out from the White House to America's three wire services, INS, AP and UP.

A voice, rather faint, came on the wire;

"This is Steve Early. I have a flash for you. The President died suddenly this afternoon."

Franklin Delano Roosevelt, who had won his third term in 1940, had succumbed suddenly to a cerebral hemorrhage at his little white cottage atop Pine Mountain in Warm Springs, Georgia.

This uncanny hex has been working without fail for more than a century and this is the year it is to be tested again. But such precedents survive only to be broken. Perhaps 1960 will be the year that rings down the curtain on this strange enigma.

WILL ECONOMIC RISE CARRY?

There's going to be an economic rise from now to the end of the year—some of it pushed by vote-seeking politicians. All important question now: will the boost carry forward into a new boomlet in 1961?

Country has been going through a minor, quiet, narrow economic recession. It has shown up in steel production, automobile and appliance inventories, some other scattered industries. In some cases, it's been below the surface—management sees the pinch, but jobs continue and production, although slow, is still underway.

Other economic segments don't see it. Consumer income and spending in total is holding up well. Home building is making a good recovery from early lows. Farm income, under a cloud earlier, is now figured to nearly match last year's $11 billion.

Officially, it would be denied. But the government has played a hand in the not-so-good results of the first six months of this year. Defense contract awards and payments were held back a little. So were road-building contracts. This makes a better government financial picture at the end of the 1960 fiscal year (June 30), and leaves some

room for quick speedups in these fields in the pre-election period.

This is normal politics. It didn't cause the recession, but may have added a little to the recession pressures. Many economists privately say this usual election-year fiscal hanky-panky may actually be beneficial—it helps prevent the expansion excesses to which a vigorous, healthy economy is often prey.

A PUSH AHEAD

The economic push, which will carry at least through the end of the year, will come in higher defense spending (up almost $1 billion over the last fiscal year), road construction, to be rushed in the remainder of the year, and in easier credit and monetary policies. This will mean more money in circulation, encouragement for consumers to make major purchases such as houses, cars, and appliances, and encouragement for business to modernize, expand, or make new investments.

Monetary policy has always been a political weapon as well as a political philosophy. Because it's somewhat illusive to see, voters rarely know that subtle use of government powers in election years. In many tight presidential years, these manipulations become less subtle than usual.

Results of the economic push will be most evident in higher employment and less unemployment this fall; in offers of lower down payments on time purchases; in higher production schedules, particularly in defense work, and thus increased overtime income for workers.

Trick will be to prevent a puncture of the trend after the end of the year.

INCREASED WORLD TENSIONS PLAGUE U.S.

Government officials here are far more concerned over progressively worsening world tensions than they admit. Official statements to the con-

trary, some top State Department policy-setters admit that U.S. troubles around the globe are more than just normal sporadic Communist agitation.

Much of the anti-U.S. outbursts in areas such as Japan and to some extent Cuba were stirred up by the Soviets in a harassing effort to sway the November elections in this country. This was to be expected. But what deeply disturbs our country's career officials is that they have been far more successful in riling up local populations than the U.S. expected.

Now, our experts wonder whether some of these "brush-fire" hate campaigns may not get out of hand and spread into real problems for this country.

Russian Premier Khrushchev's oft-repeated boast that "Russia will bury us," even if it does refer to economic rather than military rites, must always be considered by our government. International atheistic Communism has only one goal—world domination.

Reports from inside the Iron Curtain make it clear that the Reds are exploiting the unexpected successes in fomenting anti-U.S. demonstrations for all they're worth.

While little has been said, military strength in Japanese and Carribbean waters has been boosted in recent months. An increasing number of our planes are now in the air at any one time—most of them armed with atomic weapons.

Russia itself is now no longer the single major worry for this country's government leaders. They are far more fearful right now that what they term the "idiot fringe" of international politics will spark the flint which will ignite the next, and perhaps final, world conflict.

RED CHINA STEPS OUT

Communist China is the most serious threat to this country now, leaders such as Candidate Nixon are warning. Red China is slowly coming into its own as an industrial power after the ravages of past wars. It is pressed by tremendous overpopulation

problems, smarting under the second class nation category, and viciously striving to keep a restless horde of citizens in line by agitating them against the West.

Recent calls by the leaders of Asia's largest country to its military for a "head-on struggle" with the West, and increasingly open breaks from Soviet domination, could spell world trouble.

While the Russians have growing stake in world domination without conflict to protect a constantly rising standard of living, the Red Chinese still have nothing to lose by nuclear war. It is thus across the Pacific that U.S. defense worriers are now concentrating their attentions.

UNIONS STILL EYE AUTOMATION

Organized labor is considering mounting a new drive against increased job automation. AFL-CIO leaders, silent on the over-all automation controversy for several years, now are again beginning to criticise the trend and demand a bigger voice in its installation.

Chiefs of several major unions are indicating privately that they'll make job displacement by automation a major issue in contract negotiations in 1961 and later years.

Labor's power to force bargaining over job elimination has been reinforced by a recent U.S. Supreme Court case involving a railroad's effort to drop telegraphers at uneconomic stations.

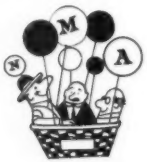
The high court ruled that job elimination is covered by "terms and conditions of employment," a valid subject for negotiation, and just cause for strikes. A weak effort by Sen. Dirksen, R., Ill., to repeal the decision with legislation got nowhere this year. Unions opposed it as "socialistic and unwarranted." They claimed it would lead to "social unrest that would delay long-range solutions to the problems resulting from automation."

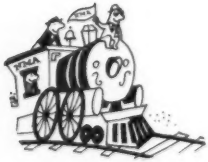
Management will see more reaction from employees when new equipment is being considered.

How to Sell Your Management Ideas

1. Start selling when you start the program.
2. Be analytical, factual, thorough, practical, and professional in your approach.
3. Bring other affected persons into your program at the start. Never surprise people.
4. Seek the ideas and contributions of others. Make the good ideas a part of the program.
5. Document your proposal in a well prepared report or presentation.
6. Clear your report with other areas of your manufacturing organization and company.
7. Present your program to management in an assembled meeting.
8. Use effective visuals . . . charts—flipovers—slides.
9. Summarize the purpose and objectives of the program.
10. Specify that agreement has been received from other departments of the company.
11. Document complete knowledge of the current method.
12. Point out the weakness of the current method.
13. Present the proposed method in enough detail to give it real substance.
14. Give credit for the contributions of others.
15. Be specific and direct in your recommendations.
16. Show the complete financial effects of the program—the effect on costs and profits.
17. Present the timing and coordination of all steps in the program.
18. Consolidate the proposal with a detailed plan of action.

From a talk by J. Emmet Judge of the Lincoln-Mercury Division, Ford Motor Company, to the Central Ohio NMA Area Council.





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